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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
NGUYEN, NGOC YEN M	
ART UNIT	PAPER NUMBER
1754	6

DATE MAILED: 04/10/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/051,512	FRANCISCO ET AL.	
	Examiner	Art Unit	
	Ngoc-Yen M. Nguyen	1754	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-19* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-19* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *4 and 5* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

DETAILED ACTION

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claims 1, 11, and 18, it is unclear what is required by "regulating" or "adjusting", is the concentration of water is regulated or adjusted to achieve a certain result or a certain effect?

In claim 2, there is no clear antecedent basis for "said interaction".

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 97/35187.

WO discloses a process for continuous production of hydrogen fluoride comprises (1) a step of reacting starting fluorspar with starting sulfuric acid, (2) a step of separating a crude reaction product as obtained in step (1) into (a) a low-boiling mixture composed predominantly of hydrogen

fluoride and (b) a high-boiling mixture composed predominantly of unreacted sulfuric acid and containing small proportions of hydrogen fluoride and water, (3) a step of purifying and isolating hydrogen fluoride from said low-boiling mixture (a), (4) a step of adding sulfuric anhydride to said high-boiling mixture (b) in a substantially equivalent amount with respect to the water to convert substantially all the water to sulfuric acid and returning it together with said unreacted sulfuric acid as sulfuric acid feed to said step (1), and (5) a step of adding sulfuric acid in a supplemental amount to provide the amount of sulfuric acid needed for reaction with starting fluorspar, wherein, in said step (4), the amount of water occurring in said high-boiling mixture (b) is determined by the method of the invention for determining the component concentration, particularly the concentration of water, of a ternary mixture (note page 4, lines 6-page 6, 31 and page 7, second full paragraph).

The process for determining the concentration of water is described in WO '187 as a method of determining the concentration of each component of a ternary mixture essentially consisting of sulfuric acid, hydrogen fluoride, and water, which comprises measuring at least one set of the three physical quantities, namely (1) temperature, (2) ultrasound propagation velocity, and (3) electrical conductivity or viscosity, of the ternary mixture and converting measured values to the concentrations of the respective components according to calibration curves representing the relationships of the concentrations of respective components of a ternary mixture composed of sulfuric acid, hydrogen

fluoride, and water with the above-mentioned three physical quantities as separately constructed beforehand (note paragraph bridging pages 6-7).

WO '187 further discloses that the use of a computer is desired in order to conduct the treatment accurately and fast (note first paragraph on page 14).

The difference is WO '187 does not specifically discloses the use of a probe comprises a diamond tipped ATR probe.

It would have been obvious to one of ordinary skill in the art at the time of the invention was made to use any known means in the art to performed the functions required in WO '187 in order to accurately estimate the amount of water, without a showing of criticality or unexpected results, the use such probe is not seen as a patentable difference since the probe is a known and commercially available means in the art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ngoc-Yen M. Nguyen whose telephone number is (703) 308-2536. The examiner is currently on Part time schedule.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman can be reached on (703) 308-3837. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Ngoc-Yen M. Nguyen
Primary Examiner
Art Unit 1754

nmn
April 7, 2003